

In the specification:

Amend the paragraph bridging pages 11 and 12 as follows:

The remotely controlled gyrostabilized operator crane contains a boom 1 composed of an inner part 2 formed with the possibility of turning in bearings 3, 4 along the axis 5 of the boom [5]1, connected with the drive 6 of the inner part 2 of the boom [6]1. The boom 1 is mounted on the vertical support 7 with the possibility of the vertical turning in the bearings 8, 9 around the axis 10 of the vertical turning of the boom [10] and connected with the vertical drive 11 of the boom [11] 1, wherein the vertical support 7 is mounted on the base 12 arranged on the carrier 13 with the possibility of horizontal turning in the bearing 14 around the axis 15 of suspension of the vertical support [15] 7 and connected with the drive 16 of the vertical support [16] 7. The hinge link 17 for placing a movie and television shooting equipment 18 mounted on the end of the inner part of the boom 2 with the possibility of turning around the axis 19 of suspension of the hinge link [19] 17 in the bearing 20 perpendicular to the axis 5 of the boom [5] 1, connected with the drive 21 of the hinge link [21] 17 by a mechanism of a parallelogram-type 22 composed of a driving and driven blocks 23, 24 connected by a cable 25 mounted in the tail part of the inner part 2 of the boom [2] 1, a vertical drive 11 of the boom [11] 1, drives 6 of inner parts 2 and 21 of the

boom [6] and of the hinge link 17 mounted in the tail part of the inner part of the boom [2] performed partially the function of the counterweight [6] 26.

Please amend the paragraph bridging pages 12 and 13 as follows:

The gyroscopic sensitive element 27 of the hinge link [27] is mounted on the hinge link 17 so that its measuring axis 19 is parallel to horizontal axis of the suspension of the hinge link [19] 17, the longitudinal and vertical accelerometer 28, 29 are mounted on the hinge link 17 so that their measuring axes and the [axes] axis 19 of the suspension of the hinge link [19] 17 are mutually perpendicular, the gyroscopic sensitive element 30 of the inner part of the boom [30] mounted on the inner part 2 of the boom [2] so that its measuring axis 5 is parallel to the axis 5 of the boom [5] 1, the transverse accelerometer 21 mounted on the inner part of the boom 2 so that its measuring axis is parallel to the axis 19 of suspension of the hinge link [19], the gyroscopic sensitive element 32 of the boom [32] 1 mounted so that its measuring axis 10 is parallel to the axis of the suspension of the boom [10], the gyroscopic sensitive element 33 [of the vertical support 33] mounted on the vertical support 7 so that its measuring axis is parallel to the axis 15 of suspension of the vertical support [15].

Page 13, first complete paragraph, amend as follows:

The control board 34 provided for forming in the first output 35 of a signal for controlling the horizontal turning of the boom around an axis 15 of suspension of the vertical support [15] and in the second output 36 of a signal for controlling of the vertical turning of the boom around the axis 10 of suspension of the boom [10].

Page 13, please amend paragraph 2 on page 13 as follows:

The electronic block 37 for horizontal turning of the boom [37] has two inputs, the first input 38 is connected with the output of the gyroscopic sensitive element of the vertical support 33, the second input 39 is connected with the output of the control board 35, and the output is connected with the drive 16 of the vertical support [16] 17.

Page 13, last paragraph, amend as follows:

The electronic block 40 of the vertical turning of the boom [40] 1 has three inputs, the first input 41 is connected with the second output of the control board 34 for the vertical turning of the boom [36], the second input 42 is connected with the output of the gyroscopic sensitive element of 30 the boom [32], the third input 43 is connected with the output of the

vertical accelerometer 29, and the output is connected with the input of the vertical drive 11 of the boom [11]1.

Page 14, first paragraph, amend as follows:

The electronic block 44 of the inner part of the boom [44] has two inputs, the first input 45 is connected with the output of the transverse accelerometer 31, the second input 46 is connected with the output of the gyroscopic sensitive element 30 of the inner part of the boom [30], and the output is connected with the drive 6 of the inner part of the boom [36].

Page 14, second paragraph, amend as follows:

The electronic block 47 of the hinge link [47] has two inputs, the first input 48 is connected with the output of the longitudinal accelerometer 28, the second input 49 is connected with the output of the gyroscopic sensitive element 27 of the hinge link [27], and the output is connected with the input of the drive 21 of the hinge link [21] 17.

Please amend the paragraph bridging pages 14 and 15 as follows:

When there are no signals from the control board 34, the possibility of turning of the movie and television shooting equipment 8 and the elements of the construction of the crane exists only as a result of action on them by external disturbing movements, for example friction in the bearings and drives, disbalance, aerodynamic forces, stretching of current conductors, etc. Therefore for stabilization of the position of the hinge link 17 and the shooting equipment 18 arranged on it, it is necessary that, by means of the gyroscopic sensitive elements [32, 27, 30, 31] 27, 30, 32, 33 of the boom 1, the hinge link [27] 17, the inner part of the boom [30] 2, the vertical support 33, the electronic block 37, 40 of the horizontal and vertical turning of the boom [37, 40], electronic block 44 of the inner part of the boom [44,] electronic block 47 of the hinge link [47] 17 and the drives 16, 11, 6, 21, to apply to corresponding elements of the crane the moments which compensate the above listed outer disturbing moments.

Page 15, first complete paragraph, amend as follows:

With the action on the hinge link [13] 17 of the moment of outer surface around the axis 19 of suspension of the hinge link [19] 17, the gyroscopic sensitive element 27 [of the hinge link 27] generates a signal which is supplied to the second input 49 of the electronic block 47 of the hinge link [49] 17. This signal is amplified by this block, and from its outlet is supplied to the input of the drive 21 of the hinge link [21] 17. The obtained

moment, by means of the mechanism of the parallelogram type 22 containing the driving block 23, the cable 25, and the driven block 24. Is transmitted to the hinge link 17 and compensates the moment of the outlet forces, so as to provide the immovability of the movie and television equipment 18.

Please amend the paragraph bridging pages 15 and 16 as follows:

With the action on the hinge link 17 of the moment of outer forces around the axis 5 of the boom [5] 1, it is transmitted through the bearing 20 to the inner part of the boom, the gyroscopic sensitive element 30 of the inner part of the boom [30] generates a signal which is supplied to the second input 46 of the electronic block 44 of the inner part 2 of the boom [46]. This signal is amplified by this block, and from its output is supplied to the input of the drive 6 of the inner part 2 of the boom [6]. The obtained moment, through the bearing 20, is supplied through the hinge link 17 and compensates the moment of the outer forces, so as to prevent the change of the position of the hinge link 17 in the space around the axis of suspension 5 of the inner part 8 of the boom [5] so as to provide the immovability of the movie and television shooting equipment 18.

Page 16, first complete paragraph, amend as follows:

With the action of the moment of the outer forces on the boom 1 around the axis 10, the gyroscopic sensitive element 32 of the boom [32] 1 generates a signal which is supplied to the second input 42 of the electronic block 40 for the vertical turning of the boom [40] 1. This signal is amplified by this block, and from its output is supplied to the input of the vertical drive 11 of the boom [11] 1. The moment generated by the drive 11 compensates the moment of the outer forces, so as to prevent vibration of the boom 1 around the axis 10.

Please amend the paragraph bridging pages 16 and 17 as follows:

With the action of the moment of outer forces on the boom 1 around the axis 15, it is transmitted through the bearings 8, 9 to the vertical support 7. The gyroscopic sensitive element [of the boom 33] 33 generates the signal which is supplied to the first input 38 of the electronic block 37 of the horizontal turning of the boom [37] 1. This signal is amplified by this block, and from its output is supplied to the input of the drive 16 of the vertical support [16] 7. The moment generated by the drive compensates the moment of the outer forces so as to prevent vibrations of the boom 1 around the axis 18.

Page 17, first paragraph, amend as follows:

Therefore, in the absence of signals from the control board 34, the moments of the outer forces applied to the movie shooting equipment 18 around the axes 5 and 19, and also to the boom 1 around the axes 10 and 15 are compensated which allows to exclude vibrations of the shooting equipment 18 and the boom 1.

Page 17, second paragraph, amend as follows:

With the supply from the second output 36 of the control board 34 of a signal for controlling the boom 1 around the axis 10 to the first input 41 of the electronic block 40 for the vertical turning of the boom [40] 1, it is added to the output signal of the gyroscopic sensitive element 32 of the boom [32] 1 supplied to the [first] second input 42 of the electronic block 40.

Page 17, last paragraph, amend as follows:

As a result, in the block 40 a signal is formed which corresponds to the turning of the coordinate system, modeled by the gyroscopic sensitive element 32 of the boom [32] 1. This signal is supplied to the input of the vertical drive 11 of the boom [11] 1, which turns the boom 1 around the axis 10 of suspension of the boom 10 in exact correspondence to the signal and to the first output 36 of the control board 34.

Page 18, first paragraph, amend as follows:

With the supply from the first output 35 of the control board 34 of the signal for controlling of the boom 1 around the axis 15 to the second input 39 of the electronic block 37 of the horizontal turning of the [booms 37] boom, it is added to the output signal of the gyroscopic sensitive element 33 of the vertical support [33] Z supplied to the first input 38 of the above mentioned electronic block 37. As a result, at the output of this block 37 a signal is formed which corresponds to the turning of the coordinate system modeled by the gyroscopic sensitive element 33 of the vertical support [33] Z. This signal is supplied to the input of the drive 16 of the vertical support [16] Z, which turns the boom 1 around the axis 15 in exact correspondence with the signal and the first output 35 of the control board 34.

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Please amend the paragraph bridging pages 18 and 19 as , follows:

The inaccuracies of the gyroscopic sensitive element 30 of the inner part 2 of the boom [30], the electronic block 44 of the inner part 2 of the boom [44], and also outer disturbing moments applied to the hinge link 17 and the inner part 2 of the boom [2] 1 around the axis 5 of the boom [5] 1 during a long time interval can cause its turning around this axis. In order to exclude this turning, the transverse accelerometer 31 is arranged and

measures the deviation of the axis 19 of the suspension of the hinge link [19] 17 from the surface of the horizon. From the output, the signal is supplied to the first input 45 of the electronic block 44 of the inner part 2 of the boom [44] and is added to the signal at the second input 46 of the block 44 so as to cause turning of the coordinate system modeled by the gyroscopic sensitive element 30 of the inner part 2 of the boom [30] toward the side which is opposite to the deviation of the axis 19 of suspension of the hinge link [19] 17 from the plane of horizon. At the output of the electronic block 44 of the inner part 2 of the boom [44], a signal is formed which is supplied to the input of the drive 6 of the inner part of the boom [44], which turns it and the axis of suspension of the hinge link 19 to the plane of horizon.

Please amend the paragraph bridging pages 19 and 20 as follows:

Inaccuracies of the gyroscopic sensitive element 27 of the hinge link [27] 17, the electronic block 47 of the hinge link [47] 17 and also outer disturbing moments applied to the shooting equipment 18 and hinge link 17 around its hinge link 19 over a long time interval can cause turning of these elements around the axis 19. For excluding this turning, a longitudinal accelerometer 28 is arranged and measures the deviation of the hinge link 17 from the plane of horizon around the axis 19 of suspension of the hinge link [19] 17. With the mentioned deviation the signal from the input of the

longitudinal accelerometer 28 is supplied to a first input 48 of the electronic block 47 of the hinge link [47] 17 and is added to the signal of the second input 49 of the gyroscopic sensitive element 27 of the hinge link [27] 17 so as to cause turning of the coordinate system modeled by this sensitive element toward the side which is opposite to the deviation of the hinge link 17 from the plane of horizon. At the output of the electronic block of the hinge link [47] 17 a signal is formed which is supplied to the input of the drive 21 of the hinge link [21] 17, which by the mechanism of parallelogram type 22 containing the driving block 23, the driven block 24 and by means of the cable 25, turn the hinge link 17 to the plane of horizon.

Page 20, first complete paragraph, amend as follows:

Application of vertical forces of the hinge link 17 or to the shooting equipment 18 at the output of the vertical accelerometer 29 causes a signal which, after amplification by the electronic block 40 of the vertical turning of the boom [40] 1, is supplied to the vertical drive 11 of the boom [11]. As a result of the action of this drive in the point of mounting of the hinge link 17 and the shooting equipment 18 a force is created which compensates the above mentioned vertical forces. Therefore, along the vertical axis the vibration of the shooting equipment 18 are excluded.

Amended specification:

Amended paragraph bridging pages 11 and 12 as follows:

The remotely controlled gyrostabilized operator crane contains a boom 1 composed of an inner part 2 formed with the possibility of turning in bearings 3, 4 along the axis 5 of the boom 1, connected with the drive 6 of the inner part 2 of the boom 1. The boom 1 is mounted on the vertical support 7 with the possibility of the vertical turning in the bearings 8, 9 around the axis 10 of the vertical turning of the boom and connected with the vertical drive 11 of the boom 1, wherein the vertical support 7 is mounted on the base 12 arranged on the carrier 13 with the possibility of horizontal turning in the bearing 14 around the axis 15 of suspension of the vertical support 7 and connected with the drive 16 of the vertical support 7. The hinge link 17 for placing a movie and television shooting equipment 18- mounted on the end of the inner part of the boom 2 with the possibility of turning around the axis 19 of suspension of the hinge link 17 in the bearing 20 perpendicular to the axis 5 of the boom 1, connected with the drive 21 of the hinge link 17 by a mechanism of a parallelogram-type 22 composed of a driving and driven blocks 23, 24 connected by a cable 25 mounted in the tail part of the inner part 2 of the boom 1, a vertical drive 11 of the boom 1, drives 6 of inner parts 2 and 21 of the boom and of the hinge link 17

mounted in the tail part of the inner part of the boom performed partially the function of the counterweight 26.

Amended paragraph bridging pages 12 and 13 as follows:

The gyroscopic sensitive element 27 of the hinge link is mounted on the hinge link 17 so that its measuring axis 19 is parallel to horizontal axis of the suspension of the hinge link 17, the longitudinal and vertical accelerometer 28, 29 are mounted on the hinge link 17 so that their measuring axes and the axis 19 of the suspension of the hinge link 17 are mutually perpendicular, the gyroscopic sensitive element 30 of the inner part of the boom mounted on the inner part 2 of the boom so that its measuring axis 5 is parallel to the axis 5 of the boom 1, the transverse accelerometer 21 mounted on the inner part of the boom 2 so that its measuring axis is parallel to the axis 19 of suspension of the hinge link, the gyroscopic sensitive element 32 of the boom 1 mounted so that its measuring axis 10 is parallel to the axis of the suspension of the boom, the gyroscopic sensitive element 33 mounted on the vertical support 7 so that its measuring axis is parallel to the axis 15 of suspension of the vertical support.

Page 13, first complete paragraph, amended:

The control board 34 provided for forming in the first output 35 of a signal for controlling the horizontal turning of the boom around an axis 15 of suspension of the vertical support and in the second output 36 of a signal for controlling of the vertical turning of the boom around the axis 10 of suspension of the boom.

Page 13, amended paragraph 2 on page 13:

The electronic block 37 for horizontal turning of the boom has two inputs, the first input 38 is connected with the output of the gyroscopic sensitive element of the vertical support 33, the second input 39 is connected with the output of the control board 35, and the output is connected with the drive 16 of the vertical support 17.

Page 13, last paragraph, amended:

The electronic block 40 of the vertical turning of the boom 1 has three inputs, the first input 41 is connected with the second output of the control board 34 for the vertical turning of the boom, the second input 42 is connected with the output of the gyroscopic sensitive element of 30 the boom, the third input 43 is connected with the output of the vertical accelerometer 29, and the output is connected with the input of the vertical drive 11 of the boom 1.

Page 14, first paragraph, amended:

The electronic block 44 of the inner part of the boom has two inputs, the first input 45 is connected with the output of the transverse accelerometer 31, the second input 46 is connected with the output of the gyroscopic sensitive element 30 of the inner part of the boom, and the output is connected with the drive 6 of the inner part of the boom.

Page 14, second paragraph, amended:

The electronic block 47 of the hinge link has two inputs, the first input 48 is connected with the output of the longitudinal accelerometer 28, the second input 49 is connected with the output of the gyroscopic sensitive element 27 of the hinge link, and the output is connected with the input of the drive 21 of the hinge link 17.

Amended paragraph bridging pages 14 and 15:

When there are no signals from the control board 34, the possibility of turning of the movie and television shooting equipment 8 and the elements of the construction of the crane exists only as a result of action on them by external disturbing movements, for example friction in the bearings and drives, disbalance, aerodynamic forces, stretching of current

conductors, etc. Therefore for stabilization of the position of the hinge link 17 and the shooting equipment 18 arranged on it, it is necessary that, by means of the gyroscopic sensitive elements 27, 30, 32, 33 of the boom 1, the hinge link 17, the inner part of the boom 2, the vertical support 33, the electronic block 37, 40 of the horizontal and vertical turning of the boom, electronic block 44 of the inner part of the boom electronic block 47 of the hinge link 17 and the drives 16, 11, 6, 21, to apply to corresponding elements of the crane the moments which compensate the above listed outer disturbing moments.

Page 15, first complete paragraph, amended:

With the action on the hinge link 17 of the moment of outer surface around the axis 19 of suspension of the hinge link 17, the gyroscopic sensitive element 27 generates a signal which is supplied to the second input 49 of the electronic block 47 of the hinge link 17. This signal is amplified by this block, and from its outlet is supplied to the input of the drive 21 of the hinge link 17. The obtained moment, by means of the mechanism of the parallelogram type 22 containing the driving block 23, the cable 25, and the driven block 24. Is transmitted to the hinge link 17 and compensates the moment of the outlet forces, so as to provide the immovability of the movie and television equipment 18.

Amended paragraph bridging pages 15 and 16:

With the action on the hinge link 17 of the moment of outer forces around the axis 5 of the boom 1, it is transmitted through the bearing 20 to the inner part of the boom, the gyroscopic sensitive element 30 of the inner part of the boom generates a signal which is supplied to the second input 46 of the electronic block 44 of the inner part 2 of the boom. This signal is amplified by this block, and from its output is supplied to the input of the drive 6 of the inner part 2 of the boom. The obtained moment, through the bearing 20, is supplied through the hinge link 17 and compensates the moment of the outer forces, so as to prevent the change of the position of the hinge link 17 in the space around the axis of suspension 5 of the inner part 8 of the boom so as to provide the immovability of the movie and television shooting equipment 18.

Page 16, first complete paragraph, amended:

With the action of the moment of the outer forces on the boom 1 around the axis 10, the gyroscopic sensitive element 32 of the boom 1 generates a signal which is supplied to the second input 42 of the electronic block 40 for the vertical turning of the boom 1. This signal is amplified by this block, and from its output is supplied to the input of the vertical drive 11 of the boom 1. The moment generated by the drive 11 compensates the

moment of the outer forces, so as to prevent vibration of the boom 1 around the axis 10.

Amended the paragraph bridging pages 16 and 17:

With the action of the moment of outer forces on the boom 1 around the axis 15, it is transmitted through the bearings 8, 9 to the vertical support 7. The gyroscopic sensitive element 33 generates the signal which is supplied to the first input 38 of the electronic block 37 of the horizontal turning of the boom 1. This signal is amplified by this block, and from its output is supplied to the input of the drive 16 of the vertical support 7. The moment generated by the drive compensates the moment of the outer forces so as to prevent vibrations of the boom 1 around the axis 18.

Page 17, first paragraph, amended:

Therefore, in the absence of signals from the control board 34, the moments of the outer forces applied to the movie shooting equipment 18 around the axes 5 and 19, and also to the boom 1 around the axes 10 and 15 are compensated which allows to exclude vibrations of the shooting equipment 18 and the boom 1.

Page 17, second paragraph, amended:

With the supply from the second output 36 of the control board 34 of a signal for controlling the boom 1 around the axis 10 to the first input 41 of the electronic block 40 for the vertical turning of the boom 1, it is added to the output signal of the gyroscopic sensitive element 32 of the boom 1 supplied to the second input 42 of the electronic block 40.

Page 17, last paragraph, amended:

As a result, in the block 40 a signal is formed which corresponds to the turning of the coordinate system, modeled by the gyroscopic sensitive element 32 of the boom 1. This signal is supplied to the input of the vertical drive 11 of the boom 1, which turns the boom 1 around the axis 10 of suspension of the boom 10 in exact correspondence to the signal and to the first output 36 of the control board 34.

Page 18, first paragraph, amended:

With the supply from the first output 35 of the control board 34 of the signal for controlling of the boom 1 around the axis 15 to the second input 39 of the electronic block 37 of the horizontal turning of the boom, it is added to the output signal of the gyroscopic sensitive element 33 of the vertical support 7 supplied to the first input 38 of the above mentioned electronic block 37. As a result, at the output of this block 37 a signal is

formed which corresponds to the turning of the coordinate system modeled by the gyroscopic sensitive element 33 of the vertical support 7. This signal is supplied to the input of the drive 16 of the vertical support 7, which turns the boom 1 around the axis 15 in exact correspondence with the signal and the first output 35 of the control board 34.

Amended paragraph bridging pages 18 and 19:

The inaccuracies of the gyroscopic sensitive element 30 of the inner part 2 of the boom, the electronic block 44 of the inner part 2 of the boom, and also outer disturbing moments applied to the hinge link 17 and the inner part 2 of the boom 1 around the axis 5 of the boom 1 during a long time interval can cause its turning around this axis. In order to exclude this turning, the transverse accelerometer 31 is arranged and measures the deviation of the axis 19 of the suspension of the hinge link 17 from the surface of the horizon. From the output, the signal is supplied to the first input 45 of the electronic block 44 of the inner part 2 of the boom and is added to the signal at the second input 46 of the block 44 so as to cause turning of the coordinate system modeled by the gyroscopic sensitive element 30 of the inner part 2 of the boom toward the side which is opposite to the deviation of the axis 19 of suspension of the hinge link 17 from the plane of horizon. At the output of the electronic block 44 of the inner part 2 of the boom, a signal is formed which is supplied to the input of the drive

6 of the inner part of the boom, which turns it and the axis of suspension of the hinge link 19 to the plane of horizon.

Amend the paragraph bridging pages 19 and 20:

Inaccuracies of the gyroscopic sensitive element 27 of the hinge link 17, the electronic block 47 of the hinge link 17 and also outer disturbing moments applied to the shooting equipment 18 and hinge link 17 around its hinge link 19 over a long time interval can cause turning of these elements around the axis 19. For excluding this turning, a longitudinal accelerometer 28 is arranged and measures the deviation of the hinge link 17 from the plane of horizon around the axis 19 of suspension of the hinge link 17. With the mentioned deviation the signal from the input of the longitudinal accelerometer 28 is supplied to a first input 48 of the electronic block 47 of the hinge link 17 and is added to the signal of the second input 49 of the gyroscopic sensitive element 27 of the hinge link 17 so as to cause turning of the coordinate system modeled by this sensitive element toward the side which is opposite to the deviation of the hinge link 17 from the plane of horizon. At the output of the electronic block of the hinge link 17 a signal is formed which is supplied to the input of the drive 21 of the hinge link 17, which by the mechanism of parallelogram type 22 containing the driving block 23, the driven block 24 and by means of the cable 25, turn the hinge link 17 to the plane of horizon.

Page 20, first complete paragraph, amended:

Application of vertical forces of the hinge link 17 or to the shooting equipment 18 at the output of the vertical accelerometer 29 causes a signal which, after amplification by the electronic block 40 of the vertical turning of the boom 1, is supplied to the vertical drive 11 of the boom. As a result of the action of this drive in the point of mounting of the hinge link 17 and the shooting equipment 18 a force is created which compensates the above mentioned vertical forces. Therefore, along the vertical axis the vibration of the shooting equipment 18 are excluded.